

Patent Abstracts of Japan

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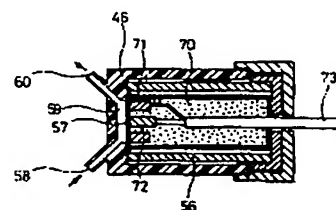
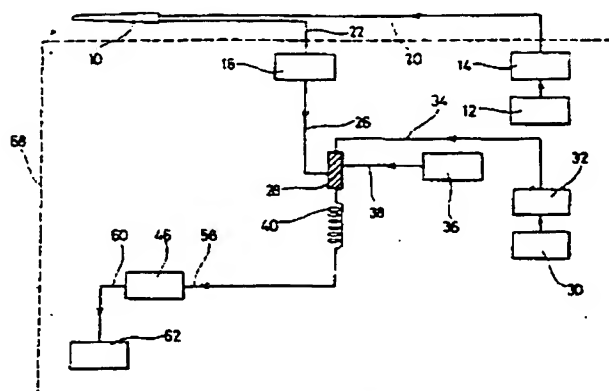
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TITLE : CONTINUOUS MEASURING DEVICE
FOR BLOOD SUGAR VALUE



ABSTRACT : PURPOSE: To enable continuous measurement of the fluctuating blood sugar value of a patient without retardation by constituting a measuring part of a membrane for immobilizing glucose oxidizing enzyme and a hydrogen peroxide electrode having $\geq 3:1$ area ratio of a silver cathode and a platinum anode in measuring the concn. of the glucose in a sample liquid contg. glucose divided by incorporating a gaseous substance of $1/3 \sim 2$ times volume of sample liquid in the continuous liquid flow of said sample.

CONSTITUTION: A tube 38 for supplying a gaseous substance, for example, air, provided with a pump 36 is connected to a mixing tube 28 to divide the flow of a dilute blood by the air. The divided samples of the dilute blood are transferred to a measuring part 46 for a blood sugar value. The part 46 is constituted of, for example, an enzyme electrode 56 and a flow cell 59, and is capable of detecting, with time, the output corresponding to the blood sugar value of the samples of the dilute blood divided by the gaseous substance and supplied via an nozzle 58. The output obtd. with the electrode 56 is fed, via an amplifier, to an arithmetic circuit for the blood sugar value, by which the blood sugar value is calculated. If the ratio of the area of the silver cathode/the area of the platinum cathode of the hydrogen peroxide electrode is ≥ 3 , the measured value in a high concn. region does not show a low value as compared to the true value and the linearity in the output is assured.

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